

# **POLICY FOR RADIOLOGICAL, NUCLEAR, AND PROCESS SAFETY REGULATION OF TWRS PRIVATIZATION CONTRACTORS**

**U.S. Department of Energy**

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# **POLICY FOR RADIOLOGICAL, NUCLEAR, AND PROCESS SAFETY REGULATION OF TWRS PRIVATIZATION CONTRACTORS**

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## Preface

The *Policy for Radiological, Nuclear, and Process Safety Regulation of TWRS Privatization Contractors* (The Policy) and the *Memorandum of Agreement for the Execution of Radiological, Nuclear, and Process Safety Regulation of TWRS Privatization Contractors* (The MOA) are companion documents aimed at facilitating and smoothing the implementation of the Tank Waste Remediation System (TWRS) Privatization Program at Hanford.

The foundation of both the Policy and the MOA is that the mission undertaken by TWRS Privatization must be accomplished safely, effectively, and efficiently and that its accomplishment will contribute positively to the overall well-being of the Hanford Site (facilitating the removal and immobilization of the existing large quantities of tank waste). As noted, the Policy and the MOA are intended to facilitate and smooth this accomplishment.

The aim of DOE in proceeding with the radiological, nuclear, and process safety regulation of TWRS Privatization contractors is to establish a regulatory environment that will permit privatization to occur on a timely, predictable, and stable basis with attention to safety consistent with that which would accrue from regulation by an external agency. Also, since external regulation of radiological and nuclear safety at some future date may occur, the exercise of DOE regulation of TWRS Privatization contractors should permit a seamless transition to an external regulatory agency. DOE is patterning its regulation of TWRS Privatization contractors to be consistent with that of the Nuclear Regulatory Commission (NRC).

The Manager of the Richland Operations Office (DOE/RL) has basic responsibility for the safety of activities at the Hanford Site. Due to the special aspects of TWRS Privatization, the Manager of DOE/RL, consistent with the Policy, has chosen to discharge this safety responsibility for TWRS Privatization through a regulatory program described herein rather than through the internal safety management program by which the Manager of DOE/RL ensures the safety of other activities for which the Manager is responsible.

The relationships between DOE and the privatized contractors performing work under fixed-priced contracts are different than the relationships under traditional Management and Operations contracts. For privatization contracts with fixed-prices to be successful, these different safety relationships with the contractors are accompanied by modified relationships among DOE's internal organizations. For example, the arrangement by which the Manager of DOE/RL applies regulation to the TWRS Privatization contractors should be a surrogate for an external regulator (such as the NRC) with strong emphasis on independence, reliability, and openness. At the same time, this regulation must continue to "fit" into DOE's overall internal safety management program.

The Policy is intended to provide a basis for establishing, among DOE Officials and organizations, these modified relationships. The MOA is intended to specify the modified relationships and the associated roles and responsibilities. The MOA cannot be sufficiently detailed to speak to all the interactions among DOE Officials and organizations. The MOA does provide a basis for the key DOE Officials to commit to teamwork in implementing the Policy's objectives, principles, framework, and elements, and in ensuring adequate safety of the TWRS Privatization activities.

It should be specifically noted that the Policy and the MOA cover only the radiological, nuclear, and process safety regulation of TWRS Privatization activities. When "regulation" by DOE is stated, it is this regulation which is intended.

## Table of Contents

<b>1.0</b>	<b>Purpose</b>	<b>1</b>
<b>2.0</b>	<b>Policy</b>	<b>1</b>
<b>3.0</b>	<b>Policy Objectives</b>	<b>1</b>
<b>4.0</b>	<b>Implementing Principles</b>	<b>1</b>
	Independence	1
	Openness	2
	Efficiency	2
	Clarity	2
	Reliability	2
<b>5.0</b>	<b>Implementing Framework</b>	<b>3</b>
<b>6.0</b>	<b>Regulatory Process Elements</b>	<b>3</b>
	Top-Level Safety Standards and Principles	3
	Standards Identification	3
	Approval of Contractor's Recommended Standards and Requirements	4
	Initial Safety Review	4
	Construction Authorization	4
	Operating Authorization	4
	Regulatory Oversight	5
	Deactivation Authorization	5
	Independent Oversight	5
	Public Information	5
<b>7.0</b>	<b>Responsibilities</b>	<b>5</b>
	Manager of the Richland Operations Office	5
	Assistant Secretary for Environmental Management	6
	Assistant Secretary for Environment, Safety, and Health	6
<b>8.0</b>	<b>Memorandum of Agreement</b>	<b>6</b>
	<b>Enclosure A - General Organizational Structure</b>	<b>7</b>

## **1.0 Purpose**

The purpose of this document is to establish the Department of Energy (DOE) policy for execution of the DOE radiological, nuclear, and process safety regulation of the privatized contractors providing radioactive waste treatment services under the Tank Waste Remediation System (TWRS) Privatization Program. This document also establishes the policy implementation provisions that shall be followed in the areas of regulatory principles, framework, process, responsibilities, organization, and resources.

## **2.0 Policy**

It is DOE's policy that TWRS privatized contractor activities be regulated in a manner that assures adequate radiological, nuclear, and process safety by application of regulatory concepts and principles consistent with those of the Nuclear Regulatory Commission.

## **3.0 Policy Objectives**

The objectives of this Policy are to:

1. Ensure that the activities of the TWRS privatized contractors provide a) adequate safety of the workers and the public; b) compliance with applicable laws, regulations, and requirements; and c) conformance to DOE-stipulated overall safety standards and principles;
2. Enhance confidence in the safety of the privatized contractors' activities;
3. Provide predictability and stability of regulation through application of proven regulatory concepts, principles, and experience of a functioning external regulatory entity; and
4. Provide the basis for a smooth transition to external regulation, should this occur.

## **4.0 Implementing Principles**

In the implementation of this Policy, the following five principles of good regulation, which have been articulated by the NRC, shall be applied.

1. **Independence-** The implementation of radiological, nuclear, and process safety regulation of TWRS Privatization contractors at DOE/RL shall be achieved with independence at the regulatory decision level from the DOE/RL responsibilities for TWRS Program performance through TWRS Privatization contractors. The Manager of DOE/RL has responsibility and authority at DOE/RL both for safety and program performance. The Manager of DOE/RL shall assign the radiological, nuclear, and process safety regulation of TWRS Privatization contractors to the DOE/RL Director of the TWRS Regulatory Unit (the TWRS Regulatory Official) in an equivalent manner and at the same DOE/RL organizational level as the Manager assigns the performance of the TWRS Privatization

Program to the DOE/RL Assistant Manager for TWRS (TWRS Program Official). The regulatory authority of the Regulatory Official shall be exclusive to the regulation of TWRS Privatization contractors. The Regulatory Official shall be the formal point of execution of radiological, nuclear, and process safety regulation by DOE/RL of TWRS Privatization contractors. (Enclosure A shows this organizational concept)

2. Openness - The radiological, nuclear, and process safety regulation of TWRS Privatization contractors at the Hanford Site shall be transacted publicly and candidly with due consideration of proprietary information and other protected information. Pertinent and material information and opinions shall be obtained from the contractors and other interested members of the public. Regulatory decisions shall be based on objective, unbiased assessments of information and shall be documented with reasons explicitly stated. Access to this information shall be afforded to interested members of the public.
3. Efficiency - The regulation of TWRS Privatization contractors shall be accomplished with efficient management and administration of the regulatory activities. The regulatory activities shall be consistent with the risk reduction activities they are to achieve. To encourage efficiency by contractors, DOE shall define top-level radiological, nuclear, and process safety standards and principles, and rely upon the contractors to identify, and submit to the TWRS Regulatory Official for approval, the subordinate standards and requirements that will efficiently and effectively achieve conformance to these top-level safety standards and principles consistent with the nature of the activities to be performed and their associated hazards.
4. Clarity - The regulation of TWRS Privatization contractors shall be coherent, logical, and practical. It shall be readily understood and efficiently applied.
5. Reliability - The regulation of TWRS Privatization contractors shall result in assurance that radiological, nuclear, and process risks to the workers, the public, and the environment are maintained at an acceptably low level. The regulation shall be reliable and stable. The stability of regulation shall be enhanced by certainty of regulatory resources accomplished through clear identification and allocation of personnel positions and funds to the TWRS Regulatory Official.

## 5.0 Implementing Framework

The framework for radiological, nuclear, and process safety regulation of TWRS Privatization contractors shall be as follows:

1. Definition by DOE of overall safety performance standards and principles;
2. Established understanding of the hazards associated with the activities to be performed;
3. Identification and application of standards and requirements that, when implemented, provide adequate safety, demonstrate compliance with applicable laws and regulations, and demonstrate conformance with the overall safety performance standards and principles for the activities;
4. Appropriate application of principles of standards-based integrated safety management; and
5. Demonstration of continuing compliance with approved standards and requirements, and conformance with top-level safety standards and principles through integrated safety management and through independent audits.

## 6.0 Regulatory Process Elements

The regulatory process for execution of the regulation of TWRS Privatization contractors shall be clearly defined and documented and shall have, as a minimum, the following elements:

1. Top-Level Standards and Principles - A set of top-level radiological, nuclear, and process safety standards and principles, including applicable fundamental safety principles, shall be formulated by DOE and stipulated to the contractor as a basis, along with applicable laws and regulations, for the contractor's preparation of subordinate safety standards and requirements, which when implemented will provide adequate safety for the specific hazardous activities intended. The contractor's subordinate standards and requirements shall be submitted to the TWRS Regulatory Official for approval.
2. Standards Identification - A DOE-defined process shall be established and stipulated to the contractor for the contractor's preparation of a set of subordinate safety standards and requirements. This process shall have, as a minimum, the following characteristics:
  - a. Result in an assured and stable basis for adequate safety for workers and the public;
  - b. Result in demonstrable conformance to the stipulated top-level safety standards and principles, and compliance with applicable laws and regulations;
  - c. Be compatible with the TWRS Privatization procurement approach, which involves the generation of competitive, fixed price proposals and proprietary information;

- d. Permit the identification of standards appropriate to the hazards of the activities to be performed (including the use of DOE Directives as sources of standards rather than as mandated requirements);
  - e. Require justification and certification by the contractor that the set of standards 1) provides adequate safety, 2) demonstrates conformance to top-level safety standards and principles, and 3) demonstrates compliance with applicable laws and regulations. Standards not relied upon for justification of the adequacy of the set need not be dispositioned;
  - f. Use of appropriate experts in the selection process; and
  - g. Appropriate confirmation of the set of standards selected.
3. Approval of Contractor's Recommended Standards and Requirements - The set of subordinate radiological, nuclear, and process safety standards recommended by the contractor shall be formally reviewed and approved by the TWRS Regulatory Official. The approval shall be based, as a minimum, on the a) sufficiency of the set to ensure adequate safety for the workers and the public, to ensure compliance with applicable laws and regulations, and to ensure conformance with the top-level safety standards and principles stipulated to the contractor and b) execution of the standards identification process in conformance with Element 2 above. Following approval of the set of standards by the Regulatory Official, the set shall be incorporated into the contract as mandatory safety requirements to which the contractor must comply. The set shall contain, as a subset, the nuclear safety requirements in 10 CFR 830, 834 and 835 that are enforceable under 10 CFR 820. Any omission, alteration or substitution of the requirements in 10 CFR 830, 834 or 835 must be approved by DOE in accordance with the appropriate exemption procedures.
4. Initial Safety Review - Near the end of the contractor's performance of concept development, a formal review of the contractor's initial safety assessment shall be performed and documented by the TWRS Regulatory Official. The purpose of this review shall be to assess the viability and sufficiency of the contractor's approaches to achieve and maintain adequate safety through its proposed design and management practices. The results of this review shall be made available for DOE consideration in contractor selection to demonstrate tank waste treatment services at fixed unit prices.
5. Construction Authorization - A formal review of the contractor's construction authorization request, which shall include the proposed "authorization basis" for the construction of the contractor's facility, shall be performed and documented by the TWRS Regulatory Official. The purpose of this review shall be to provide the basis on which the construction authorization shall be issued by the Regulatory Official through an "authorization agreement" with the contractor. The contractor shall not proceed with construction until the Regulatory Official's authorization is obtained.
6. Operating Authorization - A formal review of the contractor's operating authorization request, which shall include the proposed "authorization basis" for the operation of the contractor's facility, shall be performed and documented by the TWRS Regulatory Official. The purpose of this review shall be to provide the



basis on which the operating authorization shall be issued by the Regulatory Official through an "authorization agreement" with the contractor. The contractor shall not proceed with operation until the Regulatory Official's authorization is obtained.

7. Regulatory Oversight - Regulatory oversight, including on-site inspection, of the contractor's implementation of the authorization agreements shall be performed by the TWRS Regulatory Unit under the TWRS Regulatory Official. The Regulatory Official has stop work authority for safety reasons. The cost of work stoppages mandated by the Regulatory Official for safety reasons shall be borne by the contractor. The Regulatory Official shall refer situations that involve potential violations of nuclear safety requirements that might warrant the imposition of civil or criminal penalties to the Office of Enforcement and Inspection under the ASEH for further investigation and, if warranted, enforcement action.
8. Deactivation Authorization - A formal review of the contractor's deactivation authorization request, which shall include the proposed "authorization basis" for the deactivation of the contractor's facility, shall be performed and documented by the TWRS Regulatory Official. The purpose of this review shall be to provide the basis on which the deactivation authorization shall be issued by the Regulatory Official through an "authorization agreement" with the contractor. The contractor shall not proceed with deactivation until the Regulatory Official's authorization is obtained.
9. Independent Oversight - Independent oversight of the radiological, nuclear, and process safety regulation of TWRS Privatization contractors shall be performed by DOE/EH consistent with DOE/EH responsibilities for independent oversight of DOE programs and activities. Recommendations and proposed corrective actions shall be directed to the Manager of DOE/RL.
10. Public Information - To ensure openness of the Regulatory Program for regulation of TWRS Privatization contractors, public notification of and public access to current safety-related information shall be provided. Public information shall be provided on major regulatory actions such as reviews of authorization requests and issuance of authorizations for construction, operation, and deactivation.

## **7.0 Responsibilities**

Discharge of the responsibilities within this Policy and their assigned execution constitutes sanctioned regulatory action by the Department.

1. Manager of Richland Operations Office (DOE/RL) - The Manager of DOE/RL shall be responsible for developing and implementing the Regulatory Program for the regulation of TWRS Privatization contractors. In the discharge of this responsibility, the Manager of DOE/RL shall ensure that the Regulatory Program meets the objectives of this Policy; follows the implementing principles of this Policy; and implements the framework and key process elements of this Policy. The Regulatory Program shall be executed by the TWRS Regulatory Official supported by an independent, dedicated organizational unit, the TWRS Regulatory Unit, at DOE/RL. The Regulatory Program shall be managed, assessed, and

supported in accordance with the practices of DOE/RL. The independence and reporting level of the Regulatory Official shall be as shown in Enclosure A.

2. Assistant Secretary for Environmental Management - The Assistant Secretary for Environmental Management (ASEM) shall provide programmatic overview of the Regulatory Program for the regulation of TWRS Privatization contractors a) to ensure that the Regulatory Program meets the expectations of the ASEM, b) to ensure that the overall needs of the TWRS Privatization Program are being met, and c) that the Regulatory Program is implemented in accordance with this Policy and other DOE Directives. The ASEM particularly shall ensure that the resources are allocated and applied to fulfill the implementing principles of this Policy.
3. Assistant Secretary for Environment, Safety, and Health - The Assistant Secretary for Environment, Safety, and Health (ASEH) shall provide independent DOE oversight of the Regulatory Program for the regulation of TWRS Privatization contractors and shall provide technical assistance to this Program. The ASEH shall particularly ensure the technical adequacy of the Regulatory Program activities and the reliability of the overall Regulatory Program. The ASEH also shall be responsible for investigating potential violations of nuclear safety requirements and, if warranted, assessing civil penalties.

## **8.0 Memorandum of Agreement**

The details of the interactions among DOE/RL, ASEM, and ASEH for discharge of the responsibilities associated with the Regulatory Program for the regulation of TWRS Privatization contractors shall be articulated in a Memorandum of Agreement (MOA). This MOA shall be signed by the Manager of DOE/RL, the ASEM, and the ASEH.

**Enclosure A**  
**General Organizational Structure**

